Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1.- 24. (Cancelled)

Claim 25. (New) A method of controlling interference from a transmitter in one communication system to a receiver in another communication system, the method comprising:

transmitting a beacon, in a beacon transmission band, from a beacon transmitter associated with the receiver, the beacon being representative of a frequency within a beacon managed band at which the receiver is trying to receive, and the beacon transmission band being separated from the beacon managed band by using a different frequency;

listening for the beacon at a beacon receiver associated with the transmitter; and

deriving a power spectral density limit for a transmission from the transmitter based upon the strength of the beacon received at the beacon receiver.

Claim 26. (New) The method according to Claim 25, wherein, for a plurality of beacons received representing the same frequency, the derived transmit power spectral density limit is related to that of the beacon received at the highest power.

Claim 27. (New) The method according to Claim 25, further comprising:

comparing the transmit power spectral density limit with a predetermined minimum transmit power spectral density required by the transmitter for that frequency; and

transmitting a signal at that frequency, only if the determined transmit power spectral density limit exceeds the minimum.

Claim 28. (New) The method according to Claim 25, wherein a predetermined maximum transmit power spectral density is set if no beacons are received at the transmitter.

Claim 29. (New) The method according to Claim 25, further comprising choosing a transmission frequency for the transmitter which permits the maximum power spectral density for the-transmission.

Claim 30. (New) The method according to Claim 25, wherein:

the transmission from the transmitter is transmitted at a frequency derived by determining the strongest received beacon which represents any one frequency; and

thereafter selecting, from the determined strongest beacons, the beacon with the lowest power; and

transmitting at the frequency represented by that selected beacon.

Claim 31. (New) The method according to Claim 29, wherein a transmit power spectral density for a transmission from the transmitter is set dependent upon the strength of the received beacon at the chosen frequency.

Claim 32. (New) The method according to Claim 25, wherein the maximum permitted power spectral density of the transmitter is set at the product of the receiver beacon power; and a factor by which the receiver can be de-sensitized minus one; and the resultant of the receiver noise figure divided by the product of the effective bandwidth at the beacon receiver for receiving the beacon, the minimum signal to noise ratio for receiving the beacon in its effective bandwidth and the noise figure of the beacon receiver at the transmitter.

Claim 33. (New) The method according to Claim 25, wherein a random time division multiple access (TDMA) protocol is applied, whereby

beacons representing different frequencies transmit at different times, such that over a series of cycles a beacon representing each frequency will be heard at a different time relative to another particular represented frequency, such that no one frequency at a higher power consistently blocks reception of a beacon representing another frequency at a lower power.

Claim 34. (New) The method according to Claim 25, wherein a code division multiple access (CDMA) protocol is applied, whereby beacons representing different frequencies are distinguished from one another by different codes.

Claim 35. (New) The method according to Claim 34, wherein a correlation period of a CDMA component of the beacon signal is controlled by a fast Fourier transform (FFT) controller.

Claim 36. (New) The method according to Claim 25, wherein each beacon transmits a type identifier and each beacon receiver comprises type specific correlation means, such that a beacon receiver can ignore same type beacons in determining whether or not or how much power to transmit.

Claim 37. (New) The method according to Claim 25, wherein a receiver transmits a beacon only if interference levels exceed an acceptable value.

Claim 38. (New) The method according to Claim 25, wherein the beacon power is adapted to the wanted signal power received at the receiver.

Claim 39. (New) The method according to Claim 25, wherein the beacon power is adapted to the interference power received at the receiver.

Claim 40. (New) The method according to Claim 25, wherein a bandwidth managed by a beacon is sufficiently narrow that substantial correlation of shadow fading applies across that bandwidth.

Claim 41. (New) The method according to Claim 25, wherein each beacon occupies a frequency bandwidth which is small compared with the total bandwidth managed by that beacon.

Claim 42. (New) The method according to Claim 41, wherein neighboring beacons in a managed bandwidth manage discrete contiguous sections of frequency, each section comprising a fraction of the beacon managed band, each beacon being separated from the frequency bandwidth which it manages by the alternate fraction.

Claim 43. (New) The method according to Claim 42, wherein each fraction is ½.

Claim 44. (New) The method according to Claim 25, wherein the beacon receiver is periodically tested with an internal beacon of known power and its associated transmitter is prevented from transmitting if a beacon receiver fault occurs.

Claim 45. (New) The method according to Claim 33, wherein beacon reception and transmission happen at the same equipment, separated in time, by arranging for reception to take place whenever transmission is not required according to schedules of the random TDMA protocol.

Claim 46. (New) A communication network comprising at least one transmitter belonging to one communication system and at least one receiver belonging to another communication system, wherein:

a beacon transmitter transmits a beacon in a beacon transmission band that is representative of a frequency within a beacon managed band and is associated with the at least one receiver;

a beacon receiver is associated with the at least one transmitter;

the beacon transmitter transmits at a beacon transmission frequency that is separated from the frequency of the beacon managed band by

transmitting at a frequency that is different from the frequency which it represents; and

a power spectral density limit for transmission at any one transmitter is determined based upon the strength of the or each beacon received at the associated beacon receiver.

Claim 47. (New) A transmitter for a communication system, the transmitter being provided with an associated beacon receiver to receive a beacon in a beacon transmission band representing frequency in a beacon man aged band, wherein:

the beacon managed band is separated from the beacon by being at a different frequency; and

a power spectral density limit for transmission from the transmitter is determined based on the strength of one or more beacons received at the associated beacon receiver.

Claim 48. (New) A receiver for a communication system, the receiver being provided with an associated beacon transmitter, wherein:

the beacon transmitter transmits at a beacon transmission frequency separated from the frequency of the beacon managed band by

transmitting at a frequency that is different from the frequency which it represents; and

a beacon can be transmitted by the beacon transmitter to control interference, such that a desired maximum power spectral density of interference received at the receiver is satisfied.